

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,140,868 B2
APPLICATION NO. : 10/708770
DATED : November 28, 2006
INVENTOR(S) : Harold W. Steele and Phillip A. Tanis

Page 1 of 3

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Abstract (57):

Line 2, "include" should be --includes--.

Column 2:

Lines 19-30, Delete duplicate paragraph "A universal lifter foot assembly for use with an ejector assembly of a mold for molding plastic parts, according to another aspect of the invention, includes a pair of gibb plates with camming surfaces defined along the gibb plates. A carrier assembly is slidable with respect to the camming surfaces. The carrier assembly includes a rod carrier, a helper carrier and wear plates. The rod carrier and the helper carrier are pivotally mounted by the wear plates. The wear plates engage the camming surfaces. The rod carrier is adapted to actuate a lifter rod. The helper carrier is adapted to slide along a stationary helper pin generally parallel to the lifter rod."

Column 3:

Line 4, Insert missing paragraph --A core blade lifter assembly 17 includes a lifter body 18 that is lifted vertically and horizontally by a lifter rod 20 in order to eject a molded plastic part having an undercut portion from the mold, as is known in the art. Core blade lifter assembly 17 includes a lifter foot assembly 22 supported by ejector plate 16 that translates vertical movement of the ejector plate to a combination of vertical and horizontal movement of lifter body 18. Lifter foot assembly 22 may be mounted beneath the ejector plate in the orientation illustrated in Fig. 1, but may, alternatively, be mounted to the top of the ejector plate. A retainer plate 24 may be utilized to assist in retaining the lifter foot assembly to the ejector plate, if necessary. Core blade lifter assembly 17 further includes helper pin 26 that is mounted parallel to lifter rod 20 and is held stationary, such as being secured at respective ends by clamp plate 24 and ejector block 12.-- before "Lifter".

Lines 62-67, Delete duplicate paragraph "In operation, helper pin 26 is fixed to ejector block 12 and clamp plate 14 at the same angle as lifter rod 20. Because rod carrier 34 and helper carrier 36 are pivotally mounted with respect to the gibb plates, lifter foot assembly 22 may be utilized with various angular orientations of the lifter rod and helper pin. In the illustrative embodiment, the lifter rod".

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Column 4:

Lines 1-11, Delete duplicate paragraph "and helper pin may be positioned at an angle of 0 to 15 degrees with respect to the direction of movement of the ejector plate and may even be utilized at an angle of up to approximately 20 degrees with respect to the direction of movement of the ejector plate. As the ejector plate actuates lifter rod 20 upwardly, helper carrier 36 slides along helper pin 26. Also, as the ejector plate 16 moves, the carrier assembly 30 moves laterally. This is assisted by the helper pin which assists in causing the slidable motion of the carrier assembly thereby reducing the lateral force placed upon the lifter rod."

Line 26, Insert missing paragraph --The present invention may be utilized with a camming surface 32 that is substantially horizontal. Alternatively, the camming surface may be placed at an angle with respect to the surface of the ejector plate as shown in the illustrated embodiment. This allows the designer to apply additional acceleration to the lifter rod or reduce the acceleration of the lifter rod depending upon the angle and the direction of slope of the camming surfaces. In the illustrative embodiment, camming surfaces 32 may typically be at an angle of between 0 and 15 degrees, but may be at an angle of up to 20 and even 30 degrees in order to provide additional acceleration to the lifter rod or reduce acceleration of the lifter rod, if needed. This further facilitates the broad use of the core blade lifter assembly in various applications.--.

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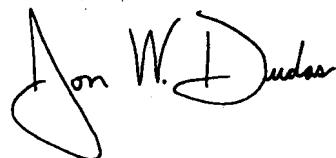
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Column 4 (cont.):

Lines 35-43, Delete duplicate paragraph --Thus, it is seen that the present invention provides a universal lifter foot assembly that is exceptionally versatile and allows the mold designer to utilize common components without the necessity for detailed design of the elements thereof. Moreover, a carrier assembly and gibb plates may be kept in stock with the angle of the camming surfaces either machined at the time of use or stocked at various angles of inclination. Other Other modifications will become apparent to those skilled in the art--

Signed and Sealed this
Eighteenth Day of September, 2007



JON W. DUDAS
Director of the United States Patent and Trademark Office